

SEQUENCE LISTING

<110> NOAB BIODISCOVERIES
SHIPMAN, Rob
LEE, David

<120> MATERIALS AND METHODS FOR ANALYSIS OF ATP-BINDING CASSETTE
TRANSPORTER GENE EXPRESSION

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<130> 13516-2

<150> US 60/529,082
<151> 2003-12-15

<160> 141

<170> PatentIn version 3.3

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 ggagccacca gcacaagtcc tgagaagggc cccctgaggt gtggctcgtg ccaagcatca 600
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<210> 19
 <211> 706
 <212> DNA
 <213> Homo sapiens

<400> 19
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 cccctgctgc cctgagccaa cgccttcacg gacctcccta gcctcctaag caaaggtaga 120
 gctgcctttt taaacctagg tcttaccagg gtttttactg tttggtttga ggcacccag 180
 tcaactccta gatttcaaaa acctttttct aattgggagt aatggcgggc actttcacca 240
 agatgttcta gaaacttctg agccaggagt gaatggccct tccttagtag cctgggggat 300
 gtccagagac taggcctctc ccctttacc ctcagagaa ggggcttccc tgtcccggag 360
 ggacacgggg aacgggattt tccgtctctc cctcttgcca gctctgtgag tctggccagg 420
 gcgggtaggg agcgtggagg gcatctgtct gccatcgccc gctgccaatc taagccagtc 480
 tcaactgtgaa ccacacgaaa cctcaactgg gggagtgagg ggctggccag gtctggaggg 540

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gcctcagggg tgcccagccc ggcacccagc gctttcgccc ctcgccacc caccctggc 600
 tggcagcctc cctccccaca cccgcccctg tgcctctgctg tctggaggcc acgtggatgt 660
 tcatgagatg cattctcttc tgtcttttggg ggatgggatg gtggca 706

<210> 20
 <211> 538
 <212> DNA
 <213> Homo sapiens

<400> 20
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 tattttataa tacttttggg atttcattaa taaggctaaa atttgaggaa tataactaat 180
 tttcagcctt aagacattta agtttggag tccttgctat tcaacagaat aacaagaaaa 240
 cttcagaatg tatcactctc ctgaaaagaa gatattaata agccctttta tttatgggta 300
 tagttttatt tatagtctca aaattcctaa agcaatgcta caaccattga atttgccata 360
 ttttgtatca gtgctgttaa tttgctgttg cctcaagaaa aagtgtttt tctccatgga 420
 tgaggctaga ccctaagaag taattaagtc aatgtaaatc aaatggaagt tttcccatga 480
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<210> 21
 <211> 753
 <212> DNA
 <213> Homo sapiens

<400> 21
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 acaaactagt caccactgga tccccatca gttgacccaa tgcaagaatc tcagacacac 180
 atgacgcacc agttacaggg gttgttttta aagaaaaaaa caatcccagc aggagggatt 240
 gctgggattg ttttttcttt aaagaagaat gttaatatat tacttttaca gtcattttcc 300
 tacatcgga tccaagctaa tttctaattg ccttcataa taattctgct ttagatgtgt 360
 atacagaaaa tgaaagaaac taggggccat atgagggaaa acccaatgtc aagtggcagc 420
 tcagccacca ctcagtgtt ctctgtgcag gagccagtcc tgattaatat gtgggaatta 480
 gtgagacatc agggagtaag tgacactttg aactcctcaa gggcagagaa ctgtctttca 540
 tttttgaacc ctcggtgtac acagaggcgg gtctataaca ggcaatcaac aaacgtttct 600
 tgagctagac caaggtcaga tttgaaaaga acagaaggac tgaagaccag ctgtgtttct 660

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taactaaatt tgtctttcaa gtgaaaccag cttccttcat ctctaaggct aaggataggg 720
 aaagggtgga tgctctcagg ctgagggagg cag 753

<210> 22
 <211> 660
 <212> DNA
 <213> Homo sapiens

<400> 22
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 ctgcagtttt gtggttgagg ggcctggaga aaatcatttt ctccccttgg cagtgtccca 120
 gggccctgga tggctctctt accaacaatct ggtcttccag gcaactcaaaa gctgggaacc 180
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 cagcctgtc ctcttggaag ggacctgggt ggactaacgg ctaacctgga cctggaactg 300
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 ccgactccag gctttccctt ttttcttttg ttcaacattg taagaacaat caatgctgtt 420
 attactgatc ccaccatgat tgatgtgggg taaatattaa ggagatggcc tcatgggaat 480
 ttgaccttga ctagaaatag agactgagag tgagcaacca gctggaaggt actatgccag 540
 tcctagcaga aaaatgtgtt aggggccttg cccaaagcag tgttggttgc ttacagtgtt 600
 gattgatttt gttctttttt cttaccacct cttttctttc cctctcatgg tacctgctca 660

<210> 23
 <211> 810
 <212> DNA
 <213> Homo sapiens

<400> 23
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 ttgcttccat tgggctccac gacctccgag agaagctgac catcatccc caggacccca 180
 tctgtttctc tgggaagcctg aggatgaatc tcgaccctt caacaactac tcagatgagg 240
 agatttgga ggccttggag ctggctcacc tcaagtcttt tgtggccagc ctgcaacttg 300
 ggttatccca cgaagtgaca gaggctggtg gcaacctgag cataggccag aggagctgc 360
 tgtgcctggg cagggtcttg cttcggaat ccaagatcct ggtcctggat gaggccactg 420
 ctgcggtgga tctagagaca gacaacctca ttcagacgac catccaaaac gagttcgccc 480
 actgcacagt gatcaccatc gccacaggc tgcacacat catggacagt gacaaggtaa 540
 tggctcctaga caacgggaag attatagagt gcggcagccc tgaagaactg ctacaaatcc 600
 ctggaccctt ttactttatg gctaaggaag ctggcattga gaatgtgaac agcacaaaat 660

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tctagcagaa ggcccatgg gttagaaaag gactataaga ataatttctt atttaatttt 720
 attttttata aaatacagaa tacatacaaa agtgtgtata aaatgtacgt tttaaaaaag 780
 gataagtga caccatgaa cctactaccc 810

<210> 24
 <211> 722
 <212> DNA
 <213> Homo sapiens

<400> 24
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 ccggcttaac actatcatgg actacaccag ggtcctggtc ctggacaaag gagtagtagc 180
 tgaatttgat tctccagcca acctcattgc agctagaggg atcttctacg ggatggccag 240
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 gcaccttaag attttgcacc tgtaaagtgc cttacagggg aactgtgctg aatgctttag 420
 atgaggaaat gatccccaag tggatgaatga cagcctaag gtcacagcta gtttgagcca 480
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 aaagtttcgt ttctgttttt taataaaaag ctttttcctc ctggaacaga agacagctgc 660
 tgggtcaggg caccctagg aactcagtc tgtactctgg ggtgctgcct gaatccatta 720
 aa 722

<210> 25
 <211> 794
 <212> DNA
 <213> Homo sapiens

<400> 25
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 ccgaaggtaa aatttggatt gataagatct tgacaactga aattggactt cactgattta 120
 ggaagaaaat gtcaatcata cctcaggaac ctgttttggt cactggaaca atgaggaaaa 180
 acctggatcc ctttaaggag cacacggatg aggaactgtg gaatgcctta caagaggtag 240
 aacttaaaga aaccattgaa gatcttcctg gtaaaatgga tactgaatta gcagaatcag 300
 gatccaattt tagtggttga caaagacaac tgggtgtgcct tgccagggca attctcagga 360
 aaaatcagat attgattatt gatgaagcga cggcaaatgt ggatccaaga actgatgagt 420

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taatacaaaaa aaaaatccgg gagaaatttg ccactgcac cgtgctaacc attgcacaca 480
gattgaacac cattattgac agcgacaaga taatggtttt agattcagga agactgaaag 540
aatatgatga gccgtatgtt ttgctgcaaa ataaagagag cctatttttac aagatgggtgc 600
aacaactggg caaggcagaa gccgctgccc tctactgaaac agcaaaacag gtataacttca 660
aaagaaatta tccacatatt ggtcacactg accacatggg tacaacact tccaatggac 720
agccctcgac cttaactatt ttcgagacag cactgtgaat ccaacaaaaa tgtcaagtcc 780
gttccgaagg catt 794

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<210> 26
<211> 646
<212> DNA
<213> Homo sapiens

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<400> 26
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ctcagggctc ctgccttctg tcctgggtgc attactgtt tctgtcagga gagcagcggg 180
gcgaagccca ggcccccttt cactccctcc atcaagaatg gggatcacag agacattcct 240
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ctccagctcc aagacctgtt gggtccaagc cctggagcca actgctgctt tttgaggtgg 420
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tgggtctgtt ttcctttctc accgcagtcg tcgcacagtc tctctctctc tctccctca 540
aagtctgcaa cttaagcag ctcttgctaa tcagtgtctc acactggcgt agaagttttt 600
gtactgtaaa gagacctacc tcaggttgct ggttgctgtg tggttt 646

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<210> 27
<211> 747
<212> DNA
<213> Homo sapiens

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<400> 27
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tgcccacatg tgcagctcag cccccctggc ctcagggcgg gcagatcgag ttccgggact 120
ttgggctaag ataccgacct gagctccgcg tggctgtgca gggcgtgtcc ttcaagatcc 180
acgcaggaga gaaggtgggc atcgttggca ggaccggggc aggggaagtcc tccctggcca 240
gtgggctgct gcggctccag gaggcagctg aggggtgggat ctggatcgac ggggtcccca 300
ttgcccacgt ggggctgcac acactgcgct ccaggatcag catcatcccc caggacccca 360

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tccctgttccc	tggctctctg	cggatgaacc	tcgacctgct	gcaggagcac	tcggacgagg	420
ctatctgggc	agccctggag	acgggtgcagc	tcaaagcctt	ggtggccagc	ctgcccggcc	480
agctgcagta	caagtgtgct	gaccgaggcg	aggacctgag	cgtgggcccag	aaacagctcc	540
tgtgtctggc	acgtgccctt	ctccggaaga	cccagatcct	catcctggac	gaggctactg	600
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tggtcatgga	caaggggcag	gtggcag				747

<210> 28
 <211> 748
 <212> DNA
 <213> Homo sapiens

<400> 28	
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ccagaaagtg	acaagctcac agacctttga actagagttt agctggaaaa gtatgttagt 120
gcaaattgtc	acaggacagc ctttctttcc acagaagctc caggtagagg gtgtgtaagt 180
agataggcca	tgggcactgt gggtagacac acatgaagtc caagcattta gatgtatagg 240
ttgatgggtg	tatgtttttca ggctagatgt atgtacttca tgctgtctac actaagagag 300
aatgagagac	acactgaaga agcaccaatc atgaattagt tttatatgct tctgttttat 360
aattttgtga	agcaaaattht tttctctagg aaatatthtat ttttaataatg tttcaaacat 420
atattacaat	gctgtattht aaaagaatga ttatgaatta catttgtata aaataattht 480
tatatttgaa	atattgactt tttatggcac tagtattht atgaaatatt atgttaaaac 540
tggggacaggg	gagaacctag ggtgatatta accagggggc atgaatcacc ttttgggtctg 600
gaggggaagcc	ttggggctga tcgagttgtt gccacagct gtatgattcc cagccagaca 660
cagcctctta	gatgcagttc tgaagaagat ggtaccacca gtctgactgt ttccatcaag 720
ggtacactgc	cttctcaact ccaaactg 748

<210> 29
 <211> 805
 <212> DNA
 <213> Homo sapiens

<400> 29	
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cagaccaagg	gaagatccag atccagaacc tgagcgtgcg ctacgacagc tccctgaagc 120
cgggtgctgaa	gcacgtcaat gccctcatct cccctggaca gaagatcggg atctgcggcc 180

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gcaccggcag tgggaagtc tcttctctc ttgccttctt ccgcatggtg gacacgttcg      240
aagggcacat catcattgat ggcatcgaca tccgcaaact gccgctgcac accctgccgt      300
cacgcctctc catcatcctg caggaccccg tctctttcag cggcaccatc cgattttaacc      360
tggaccctga gaggaagtgc tcagatagca cactgtggga ggccttgga atcgcccagc      420
tgaagctggt ggtgaaggca ctgccaggag gcctcgatgc catcatcaca gaaggcgggg      480
agaatttcag ccagggacag aggcagctgt tctgcctggc cggggccttc gtgaggaaga      540
ccagcatctt catcatggac gaggccacgg cttccattga catggccacg gaaaacatcc      600
tccaaaaggt ggtgatgaca gccttcgcag accgcactgt ggtcaccatc gcgcatcgag      660
tgcacaccat cctgagtgc gacctggtga tcgtcctgaa gcggggtgcc atccttgagt      720
tcgataagcc agagaagctg ctgagccgga aggacagcgt cttcgccctc ttcgtccgtg      780
cagacaagtg acctgccaga gcca                                     805

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<210> 30
<211> 782
<212> DNA
<213> Homo sapiens

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<400> 30
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caatggatcc ttctcaagtt ccagaacatt ggccacaaga aggggagatc aagatacatg      120
atctgtgtgt cagatatgaa aataatctga aacctgttct taagcacgtc aaggcttaca      180
tcaaacctgg acaaaagggtg ggcatatgtg gtcgcactgg cagtgggaaa tcatcgttat      240
ctctggcctt cttcagaatg gttgatatat ttgatggaaa aattgtcatt gatgggatag      300
acatttccaa attaccactg cacacactac gttctagact ttcaatcatt ctgcaggatc      360
caatactatt cagtggttcc attagattta atttagatcc agagtgcaaa tgcacagatg      420
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cagcttccat tgacatggcc acagagaata ttttgcaaaa agtagtaatg acagcctttg      660
cagaccggac cgtggtgaca atggctcacc gtgtctcttc tattatggat gcaggccttg      720
ttttagtctt ttctgagggt atttttagtg agtgtgatac tgtcccaa at ttgttcgccc      780
ac                                     782

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<210> 31
<211> 892
<212> DNA

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<213> Homo sapiens

<400> 31

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ccccaggagc cctttttgtt cagtgggact gttcgggaaa acctggaccc ccagggccta      180
cataaggaca gggccttgtg gcaggccctg aagcagtgcc acctgagtga ggtgattaca      240
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cgctttgcca acaagacagt gctgaccatt gcccataggc tcaacacgat cctgaactca      480
gaccgggtgc tgggtgtaca agcggggaga gtggtagagc tggactcccc ggccaccctg      540
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gctcactcg gaggtccctg agcccaatcc cacaccctgc agagtctctc cctctctctg      660
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ccttgggtgg cagcatcctg aggcttcccc agaaccaggc ctctgctctg gccctcttgc      840
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<210> 32

<211> 764

<212> DNA

<213> Homo sapiens

<400> 32

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ctttgaccgt cacactgacc agcagatctg ggatgccttg gagaggacat tcctgaccaa      180
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cacaatccgt gaagccttcc agggctgcac cgtgctcgtc attgccacc gtgtcaccac      420
tgtgctgaac tgtgaccaca tcctggttat gggcaatggg aaggtggtag aatttgatcg      480
gccggaggta ctgcggaaga agcctgggtc attgttcgca gccctcatgg ccacagccac      540
ttcttcactg agataaggag atgtggagac ttcattggagg ctggcagctg agctcagagg      600
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ttctcctgga agcaggggta aatgtagggg gggtagggat tgctggatgg aaaccctgga 720
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<210> 33
 <211> 790
 <212> DNA
 <213> Homo sapiens

<400> 33
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 ctgattctag aggaggaaga ggctctgtga gatgaatagg aggagtcttc aggaggaggg 180
 gctgtcctct ccgcaggcag ccctgggtctt cagcccctcc catccacgga gtgagctggg 240
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 gaaaatattg taactttcag ttagaaatca gccacaataa acaacatggg aaaatgcctt 480
 aggatggagt ttgcaagggtt tccttgccca ttatcagaag gaaaaagagc agaattttct 540
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 gacactttta tatcttcttt attcgtcgtt aaaacgcggg aggaaattac cctgaaatgt 780
 cgccttgcaa 790

<210> 34
 <211> 787
 <212> DNA
 <213> Homo sapiens

<400> 34
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 tttctgatga agttatacca gaaaagttaa ttatttgatg ggcttgccat gtgaaaacca 180
 gaaaataacc tcgtactcac aagccagtggt aagggtatcc tgattttact aaaaaaaaaa 240
 aaaaaaaaaa agagggcggtg gacaaatatc aaattaagca agtaaagaaa aagaacaggt 300
 aagagtgtgt gtgtgtgtgt aacactttga caatactaaa ctctcataag catttaacac 360
 ttcagatgtt taacatttct gcccttttct caatttttat gacgtgcagg caaattatca 420

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ttttctgtga acacagctca gatttttggct ggaatggcta tggctatgca gtggcacttc	480
ttgtttagt ctttttgcaa actctgattc ttcagcaata tcaacgtttt aacatgctca	540
cctcagcaaa agttaagaca gctgtaaag gactgatcta caaaaaggcc ttacttttat	600
caaagtgttc tcgacaaaag ttttccactg gggaaattat taacttgatg tcagcaactc	660
atggacttga cagcaaacct caatctcctc tgggtctgcc cttttcaaat cctaattggcc	720
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<210> 35
 <211> 488
 <212> DNA
 <213> Homo sapiens

<400> 35	
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ggctcccgtt ccgtgggatg ccataaaagc cgcccagtg gaccacagt cacacagagc	120
gcctcacctg catcctctcc cccacaagag ccccaaagat cccacgggag aggggagagg	180
gacgcacagc actgcctgcc aagcgagaat gcaggccccc cccctcggc cctcaccac	240
ctctttctac agcctaattt attggattcc ctattcgtag ccatctccgt ggccaatgtg	300
actaccgtgc cagcagcggg ggcggcccag cctctgagtc ccgtggggcc ccggctccca	360
ccggtgccaa acccagcccc tgcggccgtc accccgccag cctacactgc cagccgccac	420
cggggcacac gggcctctgc ttgccagcca ggagtgcgga caccatgttc ccagctcagt	480
gccaaaga	488

<210> 36
 <211> 617
 <212> DNA
 <213> Homo sapiens

<400> 36	
gtggccaact aaacctgtac aaaatagctg acagttttat aactaatttc aatataaaaa	60
ttgttttaat ggcattttgtt gaaagaaaaa agcatggcta aaatgtatca aatgccatat	120
ttttaaattt tggacttta gcatcttaat gagggcatat aacaaattaa ttttagtaca	180
atcttaaata tttttaataa atcctttcat tttaaaaaga gaattgccaa tacagaaaag	240
gagtatccaa acaatgtctc aacctgataa tttccttagc agaattacct attgcaactt	300
ctgttcagaa atacacagct tgtttttttg cccaaggatg agtctacatt ttaagaactg	360
caatgggtata aaggaactta aggattctga gaatcatagt aataacatac attggaatag	420
tactttataa tttacaatcc ccattttacat catttcacct taatgttgag gacaatgttt	480

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tgaacaaat actatcttct ctacttttgc tttgagaaaa ttgacactca gacttgcctt 540
aatcatgcac tttactttaag gaaagatcga gaaatcaaat gaagttctcc tgactctctg 600
gtttagtgc tttttgt 617

<210> 37
<211> 735
<212> DNA
<213> Homo sapiens

<400> 37
tactcattcc ttgtgtgtgt cttggagtgc atttgactcc aggaaaagcc attttggttt 60
tccttaacta aatgataaat gtacccctct cagtctgcag tattgagttg tttaaagtat 120
atgtgcagtc ttgcttacia ggaggggtta ccatgtatca cacctaattc tccaatggt 180
tgggatatta aaacacaaag tccttaacat gccaggctca aggtcttata agagttctag 240
atttttaaga gaattagaca aatttgtgtg tgttagaagc ccattcatta gaagtgtggt 300
ggttatttgg tattaaactc caaatgagcc ataggaaggc actacatgaa ataatgcact 360
gagtatgcaa tgctatcact gtctttgact gtgattttat gtttaaaaag tatgttctaa 420
aattattata tatacatggg tgaattatgt ttccgaggca ctgttttata tctgtgaatc 480
ttgaataact tttttatatt tgggttatga tgtcaaacga tcctaagcga agatgatttc 540
agttcatcaa atcatcatta atgactttat gtattatttg cacagggaga attgaaactg 600
agtataatca ataagctaga tacgaaatca gtttctcaaa ctgagcttca gaaaggggca 660
ttttgtactc ttgtttttgc ataactgggt ttgttttttt gcagaattaa ctataacaat 720
cactgggtac cgaag 735

<210> 38
<211> 673
<212> DNA
<213> Homo sapiens

<400> 38
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aaatctggaa gtgtgagatc tgtaagaaat gaaagaaatg actcttggag tcaagagatc 120
tggaatctt ttaatcagtt aaattgtgca gcaatagatt tttacttta actgaccatt 180
taagtttttt aataagtttt ttacaaagaa agtttaaaca ttaaaaagaa ttacagcttt 240
ctgtcttctc tatcatggaa tgattttttt tattgaatct ccagatttgt atttgacagc 300
ttggtgggaa gggaagcaca ctctgctgtt ctggaatctt atgcccaggg tttttcactt 360
ctccccacat ctccctttcc acttgccagt gttgtgtagt tagaacctga accactaact 420

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tctagggggcc	tttgggtctgc	cctaccttaa	cccaaataa	agtaaataccc	tttcccctta	480
gccaaaataa	ggttgggttt	tctaaaaaaa	tagtctatat	tagggaacaa	caacagcaaa	540
ttagacaaaa	cccagaaagc	acaaagcatg	aggtggagtt	actgtgcca	aagtcctcac	600
tcagaccagt	gcccctccag	ttcagttgtc	tatgtattac	cttccttacc	ttcataatgt	660
ttgccaggct	tct					673

<210> 39
 <211> 756
 <212> DNA
 <213> Homo sapiens

<400> 39	
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gttctgtatt	cagtcattct ctaggtaatg tcatttttgt acacatatat ttatataatc 120
actgattgag	atthagga aagcatttct aaagaatatt tgcttccctt agaactacag 180
actcgaaatc	tttaaagatg gtgcctaagc atctatgtat tttttttaag ttccacagat 240
ttttctgttg	ggcaggccaa ggattataaa ccacttccct aaaggcaaca ttaatgcaaa 300
agtccccaga	tggcaatata aagtatcccc tgggtaccaca tatattcatt tgtgagtttg 360
gatatagagc	acattatcta aaccattttg tagttccaaa aaccatcta aatttcttga 420
gttcctgaat	tttgaacagg attacctgga gcctggagcc actttaagtt gtacttctga 480
ctaaactgga	attatgagtg aggaagagt tttactaaat aaatgactgg ggcaagcaaa 540
attgaggagg	aaattagaaa ctgtttgaca aactttaaga gctacttgaa ataacagaag 600
tcttgattaa	tatgcaaata atggctagaa agtatggttt aactggaccc tattatgcct 660
tttaaaaata	atttcagtaa ccataaata catgttgtaa aaaattcaaa tatacagaat 720
ggaataaaaa	aatgatctcc ctttattacc ctccca 756

<210> 40
 <211> 591
 <212> DNA
 <213> Homo sapiens

<400> 40	
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aagtctcccg	agagacatat ttgtgtggcc tagaagtct ctgtggtctc ccctcctctg 120
aagactgcct	ctggcctgca gctgacctgg caaccattca ggcacatgaa ggtggagtgt 180
gaccttgatg	tgaccgggat ccactctga ttgcatccat ttctctgaaa gacttgtttg 240
ttctgcttct	cttcatataa ctgagctggc cttatccttg gcatccccct aaacaaacaa 300
gaggtgacca	ccttattgtg aggttccatc cagccaagtt tatgtggcct attgtctcag 360

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gactctcatc actcagaagc ctgcctctga tttaccctac agcttcaggc ccagctgccc 420
cccagtccttt ggggtggtgct gttcttttct ggtggattta atgctgactc actggtacaa 480
acagctgttg aagctcagag ctggaggtga gcttctgagg cctttgccat tatccagccc 540
aagatttggt gcctgcagcc tcttgtctgg ttgaggactt ggggcaggaa a 591

<210> 41
<211> 648
<212> DNA
<213> Homo sapiens

<400> 41
tgctaccag agatcaagga gaaggaagaa atgaggaaga tcattgggcg atacgggtctc 60
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tgtctggcct ggctggcctg gcagaacccc cacatgctct tcttgatga acccaccaat 180
cacctggata tcgagaccat cgacgcctg gcagatgcca tcaatgagtt tgagggtggt 240
atgatgctgg tcagccatga cttcagactc attcagcagg ttgcacagga aatttgggtc 300
tgtgagaagc agacaatcac caagtggcct ggagacatcc tggcttaciaa ggagcacctc 360
aagtccaagc tgggtggatga ggagccccag ctcaccaaga ggaccacaaa cgtgtgcacc 420
ctgacattgg catctctgcc aaggccatga gcatcatgaa ctcgtttgta aacgacgtgt 480
ttgagcagct ggcgtgtgag gctgcccggc tggcccagta ctggggccgg accaccctga 540
catcccgaga agtccagacg gctgtgcgtc tgctgctgcc tggggagctg gccaaagcacg 600
ctgtgtctga gggcaccaag gctgtcacca agtacaccag ctccaagt 648

<210> 42
<211> 719
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (45)..(45)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (251)..(251)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (255)..(255)
<223> n is a, c, g, or t

<220>

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<221> misc_feature
 <222> (504)..(504)
 <223> n is a, c, g, or t

<220>
 <221> misc_feature
 <222> (513)..(513)
 <223> n is a, c, g, or t

<220>
 <221> misc_feature
 <222> (643)..(643)
 <223> n is a, c, g, or t

<400> 42
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 ggagtaccgt caccagctgg gtcggtatgg catctccgga gaactggcca tgcgtcctct 120
 tgccagcctg tctggggggc agaagagccg agtggccttt gctcagatga ctattgccct 180
 gccccacttc tacattctgg atgaaccac aaaccacctg gacatggaga ccattgaggc 240
 tctgggcccgt ngctncaaca atttcagggg tgggtgtgatt ctgggtgtccc acgatgagcg 300
 ctttatcagg ctggtgtgcc gggagttgtg ggtatgcgaa ggaggcggcg tcacccgtgt 360
 ggaaggagga tttgaccagt accgcgccct cctccaggga acagttccgc cgcgaaggct 420
 ttctcttagg gccaccaggc tgaggactcg cccaggaca tggactggtc tctcagacct 480
 ctggggccacc atgtaggcca ccantcccag gcnttggact tcccccaac ttggggacag 540
 ccttattccc aaatgtctct atccttttga ctggagcatc ttctgcacaa ccttgggagc 600
 ccatccaagg gttggtgagg actggtctcc cgggggtggg ggn ttggggg gtacctctgg 660
 ggttatagat tccccactg cccagctct gactggacct caagtggctg ctatgtaaa 719

<210> 43
 <211> 602
 <212> DNA
 <213> Homo sapiens

<400> 43
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 aaccctaga accgcgttgg gtttgtgggt gtctcgtgct cagccactct gccagctgg 120
 gttggatctt ctctccattc ccctttctag ctttaactag gaagatgtag gcagattggt 180
 ggtttttttt ttttttttaa catacagaat tttaaatacc acaactgggg cagaatttaa 240
 agctgcaaca cagctggtga tgagaggctt cctcagtcca gtcgctcctt agcaccaggc 300
 accgtgggtc ctggatgggg aactgcaagc agcctctcag ctgatggctg cacagtcaga 360
 tgtctggtgg cagagagtcc gagcatggag cgattccatt ttatgactgt tgtttttcac 420
 attttcatct ttctaagggtg tgtctctttt ccaatgagaa gtcatttttg caagccaaaa 480

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gtcgatcaat cgcattcatt ttaagaaatt atacctttttt agtacttgct gaagaatgat 540
 tcagggtaaa tcacatactt tgttttagaga ggcgaggggt ttaacccgag tcaccagct 600
 gg 602

<210> 44
 <211> 624
 <212> DNA
 <213> Homo sapiens

<400> 44
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 caaaacttct gcccaggact caatgcaaca ggaaacaatc cttgtaacta tgcaacatgt 120
 actggcgaag aatatttggt aaagcagggc atcgatctct caccctgggg cttgtggaag 180
 aatcacgtgg ccttggttg tatgattgtt attttctca caattgccta cctgaaattg 240
 ttatttctta aaaaatattc ttaaatttcc ccttaattca gtatgattta tcctcacata 300
 aaaaagaagc actttgattg aagtattcaa tcaagttttt ttgttgtttt ctgttccctt 360
 gccatcacac tgttgcacag cagcaattgt tttaaagaga tacattttta gaaatcacia 420
 caaactgaat taaacatgaa agaaccaag acatcatgta tcgcatatta gttaatctcc 480
 tcagacagta accatgggga agaaatctgg tctaatttat taatctaaaa aaggagaatt 540
 gaattctgga aactcctgac aagttattac tgtctctggc atttgtttcc tcacttttaa 600
 aatgaatagg taggttagta gcc 624

<210> 45
 <211> 585
 <212> DNA
 <213> Homo sapiens

<400> 45
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 cagaggaaga gtgatgggtg catgctggtg gtggcgggtg ctggtgggag gacagtgcc 120
 acctcctcct ggggatccca tggtggagac tctaaggata aggctggtgc tgcccagggt 180
 gtctacagga actgcagggtg tctaccccca agtcttccct cctcccaagc caggggtggc 240
 acagggcact agatccctgg agttcaggaa ccaacacaag cacaaccacg ggcataagtt 300
 ggccttggcc actgccacc acggccctcc ttttgtgctc catgctggca tcttactcc 360
 cctaccctt cccagccac tgctgctcat tcaaacttct gtccatgtcc ctccactgtt 420
 cctatcagca ggtggccct gggcatcaga acagcctgcc ctgggcacca ggtggcagac 480
 acactcagag catgtctggc tttcctggtg ggtccaggct cattctgctt ctgatttccc 540

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ctccccagg gctcattttc cccctttttc ctgtacacat ccctg 585

<210> 46
 <211> 637
 <212> DNA
 <213> Homo sapiens

<400> 46
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 gaaagccatg gctgggaaaa tggaagtga gctgccgact gtgcatgact gctctgaacg 180
 tctgaaatga gagtgccatg tattttctttc ttgacaggac atctcaagtc ttttaaccat 240
 taagactcca tttgtgcctc ttggatccaa gcaggccttg aatgcaatgg aagtgggttta 300
 tagtcccttg ctcttacaac ttgcaggggac atgtgggttat ttggaaattg tgactgagcg 360
 gaccaagaa tgtaaataat attcataaac ctatgggaga ctctgtgtgac tattttttttt 420
 ccttgttcta ggcacagaaa aaaataggtc agcttaaaaa tatgtttaca ttggataaag 480
 gattaggcaa aaataaaatg tttcaaggat tctgaccat aagtgcaga gaaagagagt 540
 tgtgggttta gatgaagcaa gggtatcatg cagaattggg taagaatgct tctgttctctg 600
 gaagaccag agttaaattgc agatgtccac acgaggg 637

<210> 47
 <211> 698
 <212> DNA
 <213> Homo sapiens

<400> 47
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 acagccgccc tcttgttcat gatcgggtgct ctcatccctt tcaacgtcat tctggatgtc 120
 atctccaaat gttactcaga gagggcaatg ctttactatg aactggaaga cgggctgtac 180
 accactggtc catatttctt tgccaagatc ctcggggagc ttccggagca ctgtgcctac 240
 atcatcatct acgggatgcc cacctactgg ctggccaacc tgaggccagg cctccagccc 300
 ttctgtctgc acttcctgct ggtgtggctg gtggtcttct gttgcaggat tatggcctg 360
 gccgccgcg cctgtctccc caccctccac atggcctcct tcttcagcaa tgccctctac 420
 aactccttct acctgcgcgg gggcttcatg ataaacttga gcagcctgtg gacagtgtcc 480
 gcgtggattt ccaaagtgtc cttcctgcgg tgggtgttttg aagggtgat gaagattcag 540
 ttcagcagaa gaacttataa aatgcctctc gggaacctca ccatgcgggt ctcaggagat 600
 aaaatcctca gtgtcatgga gctggactcg taccctctct acgccatcta cctcatctc 660
 attggcctca gcggtggctt catgggtcctg tactacgt 698

<210> 48
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 48
ccctgtggaa tgtacctatg tgag

24

<210> 49
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 49
gcgtaaagtg cttggaatga gggc

24

<210> 50
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 50
ccttcaacac ggacacgctc tgct

24

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 51
agcttctcca ttctgccac ctgc

24

<210> 52
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<400> 52
aaggaaaagt acggcgtgga cgac

24

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<210> 53
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<212> DNA
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<220>
<223> primer

<400> 53
ctaagacccc agcacctaata caca

24

<210> 54
<211> 24
<212> DNA
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<220>
<223> primer

<400> 54
gagcatcatc agaaaaggga gggc

24

<210> 55
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 55
gggtttctag ttctgggggc tgga

24

<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 56
aatgcaagcc gtcaggaaag tttt

24

<210> 57
<211> 24
<212> DNA
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<220>
<223> primer

<400> 57
cttacacttc agctttttacg gatg

24

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<210> 58
<211> 24
<212> DNA
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<220>
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<400> 58
agttgtgttt tgtgctgagc ctcc

24

<210> 59
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 59
gtgcctgact ctttgggtga cttt

24

<210> 60
<211> 24
<212> DNA
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<220>
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<400> 60
atagcatgga ggagtgtgaa gcgc

24

<210> 61
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 61
tttcaccacc acggcttctc tcca

24

<210> 62
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 62
gctgggtgat tttgaggagg attt

24

<210> 63

29/44

<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 63
gaaaatggca cacagttggc ttac

24

<210> 64
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 64
tgtgccagca accaaatccc atgt

24

<210> 65
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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<400> 65
tttctcctaa tgctatccct cccc

24

<210> 66
<211> 24
<212> DNA
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<220>
<223> primer

<400> 66
aggagctggg aaatgttgat gata

24

<210> 67
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 67
gccatttcac cagtttatca gacc

24

<210> 68
<211> 24

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<212> DNA
<213> Artificial Sequence

<220>
<223> primer

<400> 68
cctgctggag agtgttttgg gctt

24

<210> 69
<211> 24
<212> DNA
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<400> 69
atgtttgcga ctccctcctgc tgtg

24

<210> 70
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<212> DNA
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<220>
<223> primer

<400> 70
catcctgttt gactgcagca ttgc

24

<210> 71
<211> 24
<212> DNA
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<220>
<223> primer

<400> 71
gcaaggcagt cagttacagt ccaa

24

<210> 72
<211> 24
<212> DNA
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<220>
<223> primer

<400> 72
atattgccta tggcctgacc caga

24

<210> 73
<211> 24
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<213> Artificial Sequence

<220>

<223> primer

<400> 73
ttctcagttt cagagtgctg gccca 24

<210> 74
<211> 24
<212> DNA
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<220>

<223> primer

<400> 74
gggagtagga gctatgctaa gtgt 24

<210> 75
<211> 24
<212> DNA
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<220>

<223> primer

<400> 75
tgctcatggg ctagtggaag gtca 24

<210> 76
<211> 24
<212> DNA
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<400> 76
ttgacagcta cagtgaagag gggc 24

<210> 77
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<212> DNA
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<220>

<223> primer

<400> 77
cataagttct gtgtcccagc ctgg 24

<210> 78
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<223> primer

<400> 78

ttcgcttcta cgacatcagc tctg

24

<210> 79

<211> 24

<212> DNA

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24

<210> 80

<211> 24

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<400> 80

ccctgcagga aagaaagtgg ccat

24

<210> 81

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 81

cttagcacga acagtttcca cagc

24

<210> 82

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 82

aggttgtcgg tttcatcagc cagg

24

<210> 83

<211> 24

<212> DNA

<213> Artificial Sequence

33/44

<220>

<223> primer

<400> 83

tttattgtga gcaggagcag ccgc

24

<210> 84

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 84

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24

<210> 85

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 85

tgccaccatc ccatccacca aaga

24

<210> 86

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 86

gcaaggcatg aactgctagg tatt

24

<210> 87

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 87

ggtttcttct tccagtctaa tcag

24

<210> 88

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> primer

<400> 88
ttgtcattgc ccatcgcttg tcca 24

<210> 89
<211> 24
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<220>
<223> primer

<400> 89
agagcatcca ccctttccct atcc 24

<210> 90
<211> 24
<212> DNA
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<223> primer

<400> 90
gctcccatca cctctaacad cctt 24

<210> 91
<211> 24
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<213> Artificial Sequence

<220>
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<400> 91
tgagcaggta ccatgagagg gaaa 24

<210> 92
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
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36/44

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39/44

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40/44

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41/44

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42 / 44

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43/44

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44/44

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